UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,561	02/01/2005	Martin Heugel	07-2300	1192

20306 7590 04/15/2009

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

EXAMINER	
KOCH, GEORGE R	

ART UNIT	PAPER NUMBER
1791	

MAIL DATE	DELIVERY MODE
04/15/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/523,561	HEUGEL, MARTIN	
	Examiner	Art Unit	
	George R. Koch III	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-20* is/are pending in the application.

4a) Of the above claim(s) *12-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-11,19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant argues that the amendments to the independent claims should result in reconsideration of Group II. This is unpersuasive since the claims no longer correspond to the claims of the PCT applications, and therefore restriction would be proper under U.S. practice. Additionally, the restriction was made final in the prior action.

The requirement is still deemed proper and is therefore still treated as FINAL.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, 5, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11-245,306 (disclosed on the 4/29/2008 IDS as application number 10-051177).

As to claim 1, JP 11-245,306 discloses a device for layerwise generative production of three-dimensional objects by acting of electromagnetic or particle radiation at respective positions corresponding to the cross-section of the object in the respective layer comprising: at least two building regions (resin containers 1/2 and 3/4) which are separated from each other for objects to be produced; a radiation source for emitting the electromagnetic or particle radiation (laser generator 13) toward the building regions (regions 1/2 and ¾, as shown in Figures), characterized by a switch device for switching a pathway of the radiation from the radiation source between the building regions such that one building region is irradiated at a time, wherein the switch device comprises a switchable optical element or a beam switch (optical switch means

14) and a control device (system control means 20) which controls the switch device such that during a process step in one building region which runs without participation of the radiation source, a process step with participation of the radiation source runs in another building region.

As to claim 2, JP 11-245,306 discloses that the building regions are provided in separate process chambers (containers 2 and 3, see Figure 1).

As to claim 5, JP 11-245,306 discloses a control device for the switch device, and this switch is capable of operation such that during the solidification of a layer in the one building region, other process steps such as application of a layer, loading or unloading take place in another building region.

As to claim 10, JP 11-245,306 discloses that the radiation source is formed to be a laser (laser generator 13).

As to claim 11, the radiation source of JP 11-245,306 is capable of being used or formed to be a source for generating a beam of particles of a binder material.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 3, 6-8, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-245306 as applied above.

As to claim 3, official notice is taken that using optical fibres are connected to the switch device for inputting and outputting of the radiation is well known and conventional. Optical fibers are frequently used to route laser signals, and provide highly efficient means for doing so. Therefore, the use these building regions as claimed is obvious to one of ordinary skill in the art at the time of the invention as being well known and conventional.

As to claim 19, JP 11-245306 discloses a control device which controls the switch device such that during a process step in one building region which runs without participation of the radiation source, a process step with participation of the radiation source runs in another building region.

As to claim 6 and 20, official notice is taken that using more than two building regions are provided which are assigned to either separated process chambers and/or partial regions of manifold-chambers is well known and conventional. Additionally, as a separate rational, duplication of parts, such as building regions, are obvious. MPEP 2144.04. Therefore, the use these building regions as claimed is obvious to one of ordinary skill in the art at the time of the invention either as being well known and conventional, or obvious under the duplication of parts rationale.

As to claim 7, official notice is taken that using at least one further switch device switching the radiation between the building regions of a manifold-chamber is provided is well known and conventional. Additionally, as a separate rational, duplication of parts, such as switches, are obvious. MPEP 2144.04. Therefore, the use these multiple switches as claimed is obvious to one of ordinary skill in the art at the time of the invention either as being well known and conventional, or obvious to one of ordinary skill in the art at the time of the invention under the duplication of parts rationale.

As to claim 8, official notice is taken that forming the least one process chamber to be hermetically impervious is well known and conventional. Frequently, the products manufactured often require certain purity or cleanliness, especially those for use in the semiconductor industry. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have hermetically sealed the process chambers in order to achieve the necessary purity or cleanliness.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-245306 as applied to claim 2 above, and further in view of Wilkening (US 6,042,774).

JP 11-245306 is silent as to whether the process chamber comprises a heating or a cooling device.

However, Wilkening discloses that it is known to include a cooling device (cooling conduit 20). Such a cooling conduit prevents degradation of the resin or powder or binder material during layer building up by ensuring optimal temperatures; additionally, the same rationale would apply to a heating device. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to have utilized cooling devices or heating devices in order to ensure that the material worked upon remains at the optimal temperature.

Response to Arguments

8. Applicant's arguments filed 1/27/2009 have been fully considered but they are not persuasive.

9. Applicant is reminded that during patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." See Phillips v. AWH Corp., 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005). See also MPEP 2111. In this case, the manner which JP 11-245306 operates reads on the switch device. Rail Part 11 does function to switch the radiation pathway towards the building regions.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-866-377-8642 and giving the operator the above TDD number. The examiner can also be reached by E-mail at george.koch@uspto.gov in accordance with MPEP 502.03. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Tucker can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George R. Koch III/
Primary Examiner, Art Unit 1791

4/12/2009